

# MISSOURI. Conservationist

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# Conservation Resolutions

The early December winds howled as I awoke earlier than normal. Weeks before, my grandfather had given me some old wooden box traps. Based on advice provided by my grandfather, I had

set the box traps in the backyard hoping to have success. Anticipation ran high as I quickly completed morning tasks so I could check traps before school. Trapping rabbits was a new and exciting outdoor adventure for me in the mid-1970s.

As we start 2013, my resolution is to make time for at least one new outdoor adventure each month. In addition, as adventures are identified and pursued, I will work to engage others. This New Year's resolution will help encourage continued learning and enhanced appreciation of Missouri's forest, fish, and wildlife resources. Over the years, past adventures have been diverse ranging from camping along a river, visiting an eagle's nest, crawling through a cave, learning identification skills for trees and grasses, wildlife photography, implementing projects to enhance wildlife habitat, completing night hikes, and mentoring others on hunts.

Your Conservation Department provides opportunities for active citizen involvement in conservation and works to maintain healthy forest, fish, and wildlife. Here are a few outdoor adventures to consider in 2013:

- **Visit a Conservation Area:** We offer more than 900 conservation areas throughout the state, with at least one within a 30-minute drive of any community. MDC works to maintain healthy forest and wildlife by conducting more than 200,000 acres of habitat management on conservation areas each year with an emphasis on natural community, waterfowl, dove, and early successional habitat management.

- **Tour a designated natural area:** These areas represent the best examples of Missouri's forests, woodlands, savannas, prairies, glades, wetlands, caves, springs, and rivers. There are 180 designated natural areas totaling 72,060 acres in 74 counties.

- **Go Fishing:** Missouri has more than 110,000 miles of streams and more than 275,000 acres of public lakes for citizens to use and enjoy. To provide close-to-home fishing access MDC stocks millions of fish each year in public waters, maintains more than 300 boat ramps, and manages more than 900 public lakes and stream areas to provide a high quality fishing experience.



- **Catch a Trout:** Missouri offers world-class trout fishing at four trout parks, 120 miles of spring-fed trout streams, Lake Taneycomo, and winter trout areas in nine cities.

- **Hike a Trail:** MDC maintains about 730 miles of designated trails on conservation areas and more than 70 unstaffed and five staffed shooting ranges for outdoor recreational use.

- **Discover Nature:** Each year MDC hosts more than 2,000 programs on hunting, fishing, trapping, and shooting sports, with more than 114,000 people attending annually. More than 1 million individuals have graduated from the Missouri Hunter Education Program.

- **Volunteer:** Each year, 10,000 to 12,000 citizens volunteer more than 250,000 hours to MDC programs such as Stream Teams, Forestkeepers, Master Naturalists, hunter education, nature centers, and shooting ranges.

What inspired this 2013 resolution? It was a recent fish gigging trip—my first ever. I learned much on this outing. A friend graciously offered to take me. The December evening found us on the Gasconade River. As our boat moved slowly upstream, I was reminded of the many benefits provided by Missouri's amazing forest, fish, and wildlife. Anticipation ran high as I was about to experience a new outdoor adventure—adding to my understanding and appreciation of our great state.

I challenge all Missourians to make more time to get outside in 2013. Missouri has much to offer. The experiences and adventures will enhance life, ensure continued learning, and create lasting memories.

Be sure to take photos as you go afield. In the near future, watch for details about how to enter the “kids in nature” photo contest. I look forward to seeing your submissions.

A handwritten signature in black ink, reading "Robert L. Ziehmer". The signature is written in a cursive style and is enclosed within a hand-drawn oval.

Robert L. Ziehmer, director



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Cover: A bald eagle catches fish early in the morning along the Mississippi River in Clarksville, Mo., by Noppadol Paothong

📷 500mm lens • f/8

1/2000 sec • ISO 800

Above: A shed antler found at the James A. Reed Conservation Area, by Noppadol Paothong.

📷 EF 17–40mm lens • f/6.3

1/500 sec • ISO 200

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## WILD DAY AFIELD

What a lousy weekend for the opening of the 2012 deer season! Then, on Monday morning, we had the ideal weather for a hunt. Temperatures around 30 degrees, no wind, and the rain-dampened leaves on the forest floor were frozen and crunched underfoot. Anything moving through the woods could be heard before seen.

At daybreak I could hear turkeys vocalizing prior to flying off the roost. They were 75 yards away in trees along the power line cut. As I looked out over the field, I saw a large-bodied bird gliding, head high, toward me. At 20 feet in front of me it suddenly veered to my left and landed on a branch just 10 feet from me. It was a great horned owl, a real beauty. Minutes later, I spotted a buck 50 yards into the field I was watching. It must have entered the grassy field while I was preoccupied with the owl. I waited

until it turned broadside and took my shot. He only went 40 yards. This was a small-rack 8-point but good eating size. In the afternoon I went back to try and fill my doe tag. Three deer jumped and ran as I approached the edge of the woods. That would be the only deer I'd see that evening. I did have another encounter, though. Around 5 p.m., as dusk was settling in, a nearby coyote let out one of those "Call of the Wild" howls that curled what little hair I have on the back of my neck. What an awesome day today was! I had to write this down and share it because days like these don't come along too often. I hunted for the rest of the season but did not take another deer.

We're having venison for dinner tonight, a celebration of this year's success. Thank you, Missouri Conservation Department. I am an outdoorsman who benefits from living in a state committed to providing a top-notch outdoor

experience for all to enjoy. Thank you to all the sportsmen and women who support such conservation efforts. Thank you to the youth of Missouri who continue taking part in our outdoor heritage. Pass along the family traditions you learn so that others may marvel at the lifelong experiences gained from time spent in our natural world. Life is good!

*Charlie Vollmer, via Internet*

## CAMOUFLAGED SURPRISE

I love getting my *Missouri Conservationist* magazine monthly. Whatever is in the mail with the magazine takes a backseat to the current issue as I immediately start going through the pages and articles.

The piece on the Osage copperhead on Page 30 of the November issue was very good, and the picture was incredible. My daughter and I were hiking in Castlewood State Park along the Meramec River bottom trail an early evening in July 2011 when I saw a slight movement. I swung the camera toward the brush and fallen timber and had to look closely to see what was moving. As your article indicated, Osage copperheads blend into their environment. My photo is not as vivid but it does show the camouflage effect.

*Bob Kusky, Ballwin*

## THANKS FOR READING!

Just a note to let you know how much I appreciate your magazine. Now that I am in my 90s, it takes me back to days when my family enjoyed birdwatching, fishing, and exploring the wilderness. I am also a fan of the cartoon. My favorite was the one about the Canadian Geese playing hockey on the frozen pond. Terrific!

*Doris Amison, Ellisville*

I read lots of publications. I believe *Missouri Conservationist* is one of the finest publications available—not just in the genre of nature and conservation but across all genres. It maintains a consistently high quality of print and photo media and has for years.

Your publication makes me proud to be a Missouri native. The work you do is an incredible asset not only to Missouri, but certainly to our neighboring states and beyond.

*Dan Blevins, via Internet*



### Reader Photo

### DUCK CREEK SUNSET

Dani Dunn of Scopus in Bollinger County, captured this image of a sunset at an icy Duck Creek Conservation Area in Southeast Missouri. "My husband, Matt, and I were out looking for eagles," said Dunn. "We were leaving the area and just happened to look behind us and saw the most beautiful sunset we had ever seen." Dunn said her husband is an avid deer and turkey hunter, while she prefers to shoot things with her camera. "Matt and I frequently enjoy taking off and going to local conservation areas to hike and just get away for the day," said Dunn. "My camera goes everywhere with me. I love landscape and nature photography."



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## MDC Online Discover more about nature and the outdoors through these sites.

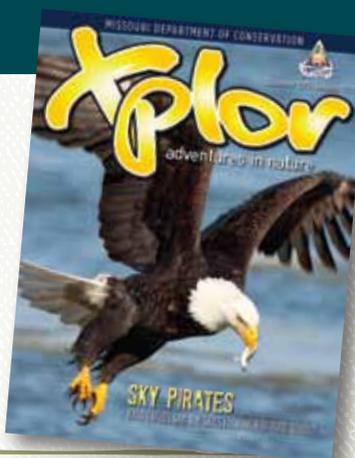
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Ozark hellbender embryos

## Good News for Hellbenders

The Saint Louis Zoo's Ron Goellner Center for Hellbender Conservation recently announced that eight female Ozark hellbenders laid nearly 3,000 fertile eggs in the Zoo's artificial nest boxes in simulated streams, promising hundreds of larvae for a cooperative live-rearing program in cooperation with MDC and the U.S. Fish and Wildlife Service.

This is the first time the zoo has produced young hellbenders from all three of its river populations. This includes hellbenders bred from a population in a habitat that has been maintained indoors for the past eight years in the Zoo's simulated White River North Fork stream. Hellbenders laid eggs in nest boxes in artificial

streams designed to simulate the Current, North Fork, and Eleven Point rivers.

Rivers in south-central Missouri and adjacent Arkansas once supported up to 8,000 Ozark hellbenders. Today, fewer than 600 exist in the world—so few that the amphibian was added to the federal endangered species list in 2011.

Due to these drastic declines, captive propagation became a priority in the long-term recovery of the species. Once the captive-bred larvae are 3 to 8 years old, they can then be released into their natural habitat—the Ozark aquatic ecosystem.

MDC works with citizens to sustain healthy forests, fish, and wildlife.

## New Fish Identified

The latest addition to the list of fish found in Missouri has been named to honor conservation pioneering President Theodore Roosevelt. Rick Mayden at St. Louis University and Steve Layman of Kennesaw, Ga., determined that the speckled darter (*Etheostoma stigmaeum*), whose distribution stretched from the western Appalachian Mountains to eastern Oklahoma, actually comprised five distinct species. One, *Etheostoma teddyroosevelt*, inhabits the upper White River drainage in Missouri, Arkansas, Oklahoma, and Kansas. The announcement of the new fish noted Roosevelt's enduring environmental conservation legacy, including creating national forests, wildlife refuges, monuments and parks, as well as his efforts to establish the American Museum of Natural History. The average person would have trouble distinguishing between the five species, all of which share torpedo-like bodies and vivid scarlet and turquoise markings.

## Schools Show "Can-Do" Attitude

Missouri elementary, middle and home school students K–8 are invited to help in the fight against litter in the Show-Me State—and to have creative and educational fun—by participating in the 2013 "Yes You CAN Make Missouri Litter-Free" trash-can-decorating contest. The annual contest is sponsored by the Missouri Department of Conservation (MDC) and the Missouri Department of Transportation (MoDOT) as part of the state's No M0re Trash! campaign to raise awareness about Missouri's litter problem and to discourage littering.

The contest encourages school classes and groups to join in the fight against litter by decorating and displaying a large trash can with the No M0re Trash! logo and a litter-prevention message using a variety of creative media. Schools may submit one entry in each competition category: K–2, 3–5, and 6–8. Entries are judged based on creativity, adherence to contest rules, and effective use of theme and logo.

"In addition to teaching kids about how litter hurts, first-place winners from each competition category receive \$200 awarded to the sponsoring schools," said MDC No M0re Trash! Coordinator Joe Jerek. "All first-place winners are then

eligible for a grand prize of a trophy and \$600 awarded to the sponsoring school."

There is no entry fee for the contest. Participating school groups must submit a completed entry form and up to three photos to [nomoretrash.org](http://nomoretrash.org) by March 8. Contest rules, entry forms, logo, past contest winners, and educational information can be found at [nomoretrash.org](http://nomoretrash.org).

## November Deer Harvest Up 8 Percent

Hunters shot 204,668 deer during the November portion of Missouri's firearms deer season, top-

ping the past four years' harvests and confirming predictions by MDC.

This year's statewide November deer harvest is approximately 8 percent more than last year. Top harvest counties during the season Nov. 10 through 20 were Howell with 4,037, followed by Texas with 3,916, and Benton with 3,756. MDC recorded five nonfatal and three fatal firearms-related hunting incidents during the 11-day November firearms deer hunt.

Eight of the 10 top harvest counties were south of the Missouri River, confirming predictions of a strong harvest in southern Missouri because



of a poor acorn crop. Meanwhile, the harvest in northern Missouri declined slightly, mirroring a decline in deer numbers there in the past 10 years



## ASK THE OMBUDSMAN

**Q:** What are the requirements for becoming a conservation agent?

**A:** Conservation agents must be 21 years old and have a Bachelor of Science degree in any number of conservation fields, such as forestry, fisheries, wildlife management, natural resources, conservation, law enforcement or biological sciences. They must be able to learn to swim, obtain a Missouri driver's license, lift heavy items such as outboard motors and work outdoors in extreme hot and cold weather. The selection process is very challenging and includes interviews, a background check, a physical fitness test, a psychological exam and a drug test. Once hired, they must complete a 26-week training course that includes more than 1,000 hours of law enforcement training. After completing the training, they must accept assignment anywhere in Missouri and be willing to transfer to new assignments when requested. Here's a link to more information on a career as a conservation agent: <http://go.usa.gov/rFBG>. It's a great career for the right type of person. Interest is usually high when new agent positions are available.

**Q:** Last summer I passed a saw mill in the Ozarks where the logs stored on the yard were being sprayed with water. What is the reason for keeping the logs wet?

**A:** If the cut logs are allowed to get too dry before they are processed in the mill, the wood can develop tiny cracks, called "checks," which will reduce the quality of the final wood lumber. You may have noticed such cracks in the ends of stacked firewood that has begun to dry. Of course, the cracks don't matter for wood that will be burned. Last summer's high temperatures, lack of rainfall, and low humidity were the worst-case scenario for the fast drying of logs. The sprayed water slows the drying process until the logs can be sawn in the mill. Reducing the checking is more important with the higher-quality logs such as those from which veneer will be cut or from which furniture will be made. After sawing, the lumber is often dried in kilns using a process that also minimizes checking.



Ombudsman Tim Smith will respond to your questions, suggestions or complaints concerning Department of Conservation programs. Write him at PO Box 180, Jefferson City, MO 65102-0180, call him at 573-522-4115, ext. 3848, or email him at [Ombudsman@mdc.mo.gov](mailto:Ombudsman@mdc.mo.gov).

(continued from Page 5)

as deer numbers have increased slowly across southern Missouri. Both trends are the result of efforts to maximize hunting opportunity while avoiding unacceptable levels of property damage and deer-vehicle collisions.

Deer hunting contributes approximately \$1.1 billion annually to the state and local economies and supports more than 12,000 jobs in Missouri.

## 2012 Fishing Records

2012 was a good year for fishing in Missouri, with anglers certifying six state-record fish.

The action began on March 23, when David Warren, Sikeston, hauled in an 11-pound, 4-ounce bowfin while bowfishing at Duck Creek Conservation Area (CA).

On April 14, Rachel Davis, Climax Springs, landed a 1-pound, 12-ounce goldeye on a pole and line at Lake of the Ozarks.

Then, on April 28, Dylan Gilmore, Perry, caught a 9-pound, 2-ounce largemouth bass on a trotline at Ka-Tonka Lake in Ralls County.

Nicholas J. Wray, Harrisonville, already had the state record for a river carpsucker in the

alternative-methods category. On May 6 he caught a 5-pound, 6-ounce specimen on a trotline from the South Grand River near Amarugia Highlands CA, giving him both state records for the species.

Wray's monopoly on river carpsucker records didn't last long. Cody Chaney, Belton, was bow fishing in a cove at Lake of the Ozarks May 27 when he shot a 5-pound, 8-ouncer.

Finally, on June 22, Brodrick Glessner, Sunrise Beach, caught a 1-pound 14-ounce brook trout on pole and line at Lake of the Ozarks.

Record fish are one reason Missouri is a great place for outdoorspeople. For details about current state records and how to apply for one, visit [mdc.mo.gov/node/2476](http://mdc.mo.gov/node/2476).

## NASP World Championship to Be Held in St. Louis

MDC expects a spike in participation by Missouri student archers with the recent announcement by the National Archery in the Schools Program (NASP) that it will hold its 2013 NASP World Championship in St. Louis. The event will be held June 28–30 at the America Center and Edward Jones Dome, home of the St. Louis Rams.

For the past four years, the NASP world tournament has been held in Orlando, Florida, at the ESPN Wide World of Sports Complex in Walt Disney World. The world tournament has drawn student archers from 25 states, Canada, Africa and New Zealand.

According to NASP, the 2013 World Championship is being relocated to St. Louis because the location is more centralized and remains equally accessible for attendees from other countries. St. Louis also provides numerous off-site attractions and is more financially friendly to attendees. The new location also allows for more favorable scheduling for coaches, teams, and schools.

NASP expects approximately 2,000 student archers to participate in the 2013 NASP World Championship, including many from Missouri's National Archery in the Schools Program (MoNASP).

MoNASP is coordinated and funded by MDC and the Conservation Federation of Missouri in partnership with hundreds of schools and supporting organizations throughout the state. MoNASP is an affiliate of NASP and promotes education, self-esteem, and physical activity for students in grades



## 2013 Eagle Days

Missouri's winter eagle watching is spectacular as large numbers of our national symbol congregate along rivers, lakes, and wetlands. You can discover nature at Eagle Days this month and next at the following MDC-sponsored events, which include guides with spotting scopes to view wild eagles and indoor programs featuring live eagles, exhibits, activities, and videos.

- **Smithville Lake Little Platte Park Course Complex**, Smithville, 9:30 a.m. to 4 p.m. Jan. 5 and 11 a.m. to 4 p.m. Jan. 6. For more information call 816-532-0174.
- **Springfield Conservation Nature Center**, Springfield, 9 a.m. to 4 p.m. Jan. 26 and 12:30 to 4:30 p.m. Jan. 27. For more information call 417-888-4237.
- **Clarksville**, Lock & Dam 24 and Apple Shed Theater, 9 a.m. to 4 p.m. Jan. 26 and 10 a.m. to 3 p.m. Jan. 27. For more information call 660-785-2420.
- **Mingo National Wildlife Refuge**, programs in the maintenance building at the refuge entrance, with viewing at nearby Duck Creek Conservation Area, from 9 a.m. to 4 p.m. Feb. 2. For more information call 573-222-3988.

For more information about Eagle Days, visit [mdc.mo.gov/node/16598](http://mdc.mo.gov/node/16598).

## DID YOU KNOW?

*We work with you and for you to sustain healthy wildlife.*

### Landowner Assistance

- » **More than 70,000** urban and rural landowners are provided with timely and responsive service by MDC each year.
- » **More than 7,000 on-the-farm visits** are made by MDC each year.
- » **Approximately \$1 million in cost share funds** were provided by MDC to assist landowners with habitat work.
- » **Partners with the U.S. Department of Agriculture** to develop and apply more than \$170 million annually in federal Farm Bill conservation programs that provide benefits to forests, fish, and wildlife.
- » **To contact a private land conservationist near you**, see Page 3 for regional office phone numbers or visit [mdc.mo.gov/node/19935](http://mdc.mo.gov/node/19935) and search for your county.

4 through 12 through participation in the sport of archery. More than 56,000 Missouri students from 262 schools participate in MoNASP.

MoNASP will hold its 2013 state tournament at the University of Central Missouri in Warrensburg March 23.

For more information on NASP, visit [archeryintheshools.org](http://archeryintheshools.org). For more information on MoNASP, visit [mdc.mo.gov/node/3813](http://mdc.mo.gov/node/3813).

### Website for Mobile Devices

MDC's website at [mdc.mo.gov](http://mdc.mo.gov) gets more than 1.5 million views each month by people looking for a variety of information. Some of the most popular topics include hunting and fishing seasons and regulations, permits purchases, and finding local MDC contacts.

These popular topics and others are now more readily available for easier and faster access on smart phones and other small-screen mobile devices through MDC's mobile version of its website.

Visit [mdc.mo.gov](http://mdc.mo.gov) through your smart phone and other small-screen mobile devices to access the mobile version. It's so simple that the website will automatically detect that you are using a device with a small-screen, such as a smart phone, and offer the option of the mobile version of the website. The mobile version also gives users the option of viewing the full-browser version of the website.

"Our enhanced website for mobile devices is one more way we are improving our services and technology to better meet the needs of the millions of Missourians and others we serve," says MDC Digital Communications Manager Chris Cloyd. "And be sure to bookmark the site for easy access."

Cloyd adds that some smart phones even allow users to save the mobile version of the website as an icon on the device screen.

### St. Louis Zoo Honors MDC Herpetologist

MDC Herpetologist Jeff Briggler was honored at the St. Louis Zoo's 21st annual Marlin Perkins Society Celebration Nov. 1. Briggler, a 12-year veteran of MDC, received the St. Louis Zoo Conservation Award for his work to preserve Missouri's amphibians and reptiles. His work has taken Briggler to every corner of the state



and a variety of habitats, ranging from prairies to swamps to forests. Since 2001, he has worked with the Zoo to lead the hellbender conservation efforts in Missouri and is considered one of the nation's leading hellbender experts. Present at the award ceremony were, from the left: Dr. Eric Miller, DVM; Senior Vice President, Director of Operations and the Zoo's WildCare Center; Briggler; and Jeff Ettling, Curator of Herpetology and Aquatics and Director of the Ron Goellner Center for Hellbender Conservation.

### CRP Incentives

Landowners in 54 Missouri counties can receive incentive bonuses for enrolling new land in the federal Conservation Reserve Program (CRP). Those with existing CRP contracts could receive

payments for management practices that enhance the value of CRP acres for wildlife.

Missouri's approximately 1.1 million acres of CRP land serve, protect, and enhance soil, water and wildlife habitat. In the past two years alone, Missouri has lost more than 200,000 acres of CRP to contract expirations and land-use conversions.

Starting Dec. 1, MDC is offering \$100 to \$150 per acre for new land enrolled in certain CRP practices. The MDC incentives are in addition to \$100 to \$150 incentive payments from the U.S. Department of Agriculture Farm Services Agency (FSA) for new enrollments.

MDC also is offering an additional \$18 to \$60 per acre for some mid-contract management activities. These payments are in addition to FSA payments for required mid-contract management activities.

Besides all of the foregoing incentives, MDC is offering landowners incentive payments of \$100 to \$200 for planting or enhancing shrubby cover within or adjacent to CRP land.

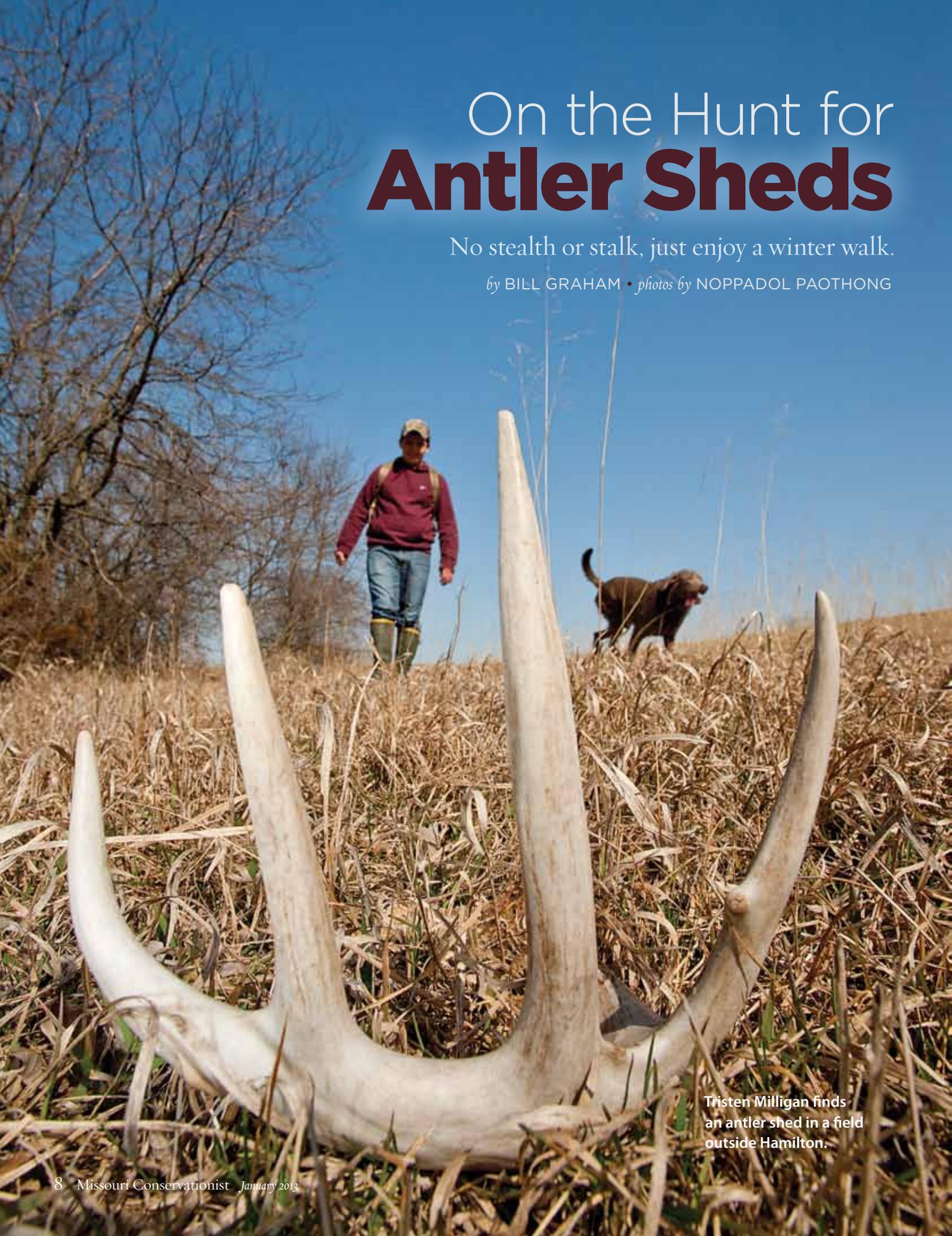
Mid-contract management incentives are available now. Incentives for new CRP acres are contingent on passage or extension of the federal farm bill.

More information is available from local MDC private land conservationists (PLCs). To find your PLC, visit [mdc.mo.gov/node/19935](http://mdc.mo.gov/node/19935).

# On the Hunt for **Antler Sheds**

No stealth or stalk, just enjoy a winter walk.

by BILL GRAHAM • photos by NOPPADOL PAOTHONG



Tristen Milligan finds  
an antler shed in a field  
outside Hamilton.

**HOLDING A WHITE-TAILED DEER ANTLER** is like touching a biological miracle.

Antlers grow in a blood-charged rush each summer on male deer. They harden into bone by fall and become weapons in an eons-old game for domination, as bucks battle for the chance to mate with does.

Then nature recycles the minerals and nutrients. Bucks shed their antlers in late winter or early spring. That's when Tyler Dykes of Blue Springs starts searching for shed antlers in what he considers his bonus hunting season.

"The minute you grab one of these antlers, you have a connection with nature," Dykes says. "It may sound crazy, but it's an emotional rush when you find one. It's like holding something that's a piece of something bigger than yourself."

Dykes, who is the earth science teacher at the Delta Woods Middle School in Lee's Summit, hunts deer with firearms and archery equipment. He takes students and his young son, Mason, afield to look for shed antlers.

Simplicity and getting outdoors makes looking for shed antlers a popular late-winter activity for individuals and families. There are no bag limits or special equipment, and unlike most hunting, you can make as much noise as you like while searching for your quarry. You simply walk the fields and forests that deer frequent and look near and far for antlers.

Looking for shed antlers is easy. Finding them is challenging. Shed antlers don't hide, but it seems that way at times because bucks often drop them in fields with tall grass or brushy areas. Their whitish-gray color often blends



with cover on the ground. Plus, they can drop anywhere over vast acres.

Shed hunters consider a found antler a trophy.

One day last winter, Dykes walked the fields at the James A. Reed Memorial Wildlife Area and saw plenty of deer trails and bedding areas—but no antlers. A few days later at another public area, he found three, including a matching pair.

"I found the five-pointers with my son, who proceeded to run toward them after I spotted them. He picked them up and shouted, 'I found it!'" Dykes says with a broad grin. "It was a proud papa moment, I must say."

Hunting shed antlers is not unlike regular hunting and fishing. Success varies and luck helps.

Vince Crawford of Hamilton, Mo., walked into some fields in Caldwell County early last March. He sent his stepson Tristen Milligan, 16, ahead to one brushy draw bisecting a hay field. Crawford and stepson Kable Milligan, 9, walked another arm of the draw. Ten minutes into the walk, Tristen was waving and holding up an antler. A few minutes later, he found the other antler from the 10-point buck only yards away.

"Is that crazy or what?" says Crawford, who is a conservation agent in Caldwell County. "We'd racked up about 25 hours this winter on antler shed hunts before this and only found one antler—and now this. You've just got to go out at the right time."

Good luck helps, but veteran shed hunters also use several important skills to increase their odds.

**Deer tracks help lead antler shed hunters to their prize. The more knowledgeable a person is about white-tailed deer habits and signs of their activity in the field, the more successful they will be at finding shed antlers.**



## Timing

White-tailed bucks can lose their antlers any time from early January to early spring. Weather seems to affect the peak times when bucks are dropping antlers, Crawford says. Last year, some bucks didn't drop their antlers until spring because a warm winter with little snow provided deer with more food and less stress. In a cold and snowy winter, with a scarcity of food and higher energy demands, bucks might drop their antlers in January.

A shed antler doesn't last forever in the wild. Critters, such as mice, gnaw on antlers to get the minerals. Weather fades them.

## Location

Looking for an antler in a hayfield is daunting without a plan. Dykes' strategy is to stick primarily to the edges of fields and woodlands. Visibility is better, and deer often frequent edge areas during morning and evening feeding times. A deer walking into brush with a loose antler might snag it on a tree limb that pulls it off.

"I just follow the trails and roads next to the timber," Dykes says. "I haven't had much luck looking in the thick timber. It seems like they blend in more there."

Trails with deer tracks in mud or snow are prime locations. Dykes will follow a trail into trees or tall grass for a short ways, especially if it appears it will lead to bedding areas. The more

**Crawford's family prefers to look for sheds near wooded edges, especially near ponds or a good food source. Deer in late winter stay close to food, water, and shelter. That's where antlers drop.**

time a deer spends in an area increases the odds that an antler will fall off in that location.

"Although I've often wondered if I'm just following does when I'm walking the trails," he says.

Crawford's family also prefers to look for sheds near wooded edges, especially near ponds or a good food source. Deer in late winter stay close to food, water, and shelter. That's where antlers drop.

Sometimes a particular spot will produce shed antler finds year after year. Usually that's because a deer herd beds down in the area consistently, he says.

If one antler is found, look carefully in the surrounding area for the other antler. There's no guarantee it's there, but Crawford says losing one antler will sometimes make a buck feel out of balance and they will rub against something nearby, trying to lose the other one.

## The Gaze

A practiced eye helps. Crawford lets his gaze wander across fields in an almost out-of-focus manner, until an unusual shape prompts him to focus. A shed hunter can search more ground with eyes than with feet.

"I'm not looking for an antler," he says. "I look for four or five inches in a straight line, and I'm looking for a white line."

A group of family or friends has better odds because they have more people searching more prime areas.

## The Carry

Most veteran shed hunters wear a backpack to carry found antlers. A helpful hint is to lash the antlers to the outside of the pack, so they don't poke you in the back during a long hike.

## Bottom Line

The more knowledgeable a shed hunter is about white-tailed deer habits and signs of their activity in the field, the more successful they will be at finding shed antlers. That's one reason, besides companionship, that Crawford likes to take his sons.

"They're learning about deer habits and habitat when we do this, things like where to find good bedding places for deer," he says. "And you can't scare off an antler, which makes hunting them a really good activity for kids."





Public lands, such as Department conservation areas, are excellent places to look for shed antlers. Dykes often searches at the James A. Reed Memorial Wildlife Area, the Burr Oak Woods Conservation Area in Blue Springs, and on Jackson County park lands, which also have healthy deer populations. Urban wildlands are just as likely to hold shed antlers as rural areas.

Getting permission to hunt shed antlers on private property can often be obtained by asking permission from landowners. Always be courteous and never enter private property without permission.

No permit is needed to find or possess shed antlers, Crawford says, as long as they are not attached to a skull. Sometimes hunters find antlers attached to a skull where a deer has died

in the field. Those finds can be kept but only if the local conservation agent is contacted and issues a possession permit. Some people mount a matched pair of antlers together on a trophy board. Others use them to decorate tables or gun cabinets. Dykes and his sons add their finds to an ever-growing ball of antlers.

Another bonus of antler shed hunts is that the openness of winter's woods and meadows makes it easier to spot wildlife. Crawford and his sons stop to examine a raccoon skull. Later, they top a hill and notice a large flock of wild turkeys in the distance. They see a coyote slinking through a brush patch. Best of all, they watch more than a dozen deer trotting over a distant rise.

"The number one thing in finding shed antlers is covering ground," Crawford says. "You've got to put in the miles to find the tines." ▲

**Tyler Dykes often searches at the James A. Reed Memorial Wildlife Area near Kansas City, which has healthy deer populations. Urban wildlands are just as likely to hold shed antlers as rural areas.**

# Mission Impossible?

*Conservationists band together to change the fate of two Missouri trees.*

by CANDICE DAVIS and A. J. HENDERSHOTT  
photos by A. J. HENDERSHOTT

**The best stories** are centered around an impossible task—something everyone thinks can never be achieved—except for one person who refuses to give up. Those stories captivate our imaginations. But you needn't look for the latest action movie or a best-selling novel to find a story like this.

Missouri's "Mission Impossible" is to save two different trees with similar plights. The heroes of this tale are ordinary citizens who refuse to accept defeat.

## A Tale of Two Trees

Two Missouri tree species are declining toward extinction, but there are some people who have vivid memories of their importance.

"The Ozark chinquapin nuts were delicious and we waited for them to fall like you would wait on a crop of corn to ripen—they were that important," says 85-year-old Harold Adams of southeast Missouri.

"Up on the hilltop, the nuts were so plentiful that we scooped them up with flat-blade shovels and loaded them into the wagons to be used as livestock feed, to eat for ourselves, and to sell," Adams says. The trees also benefited local wildlife.

"Deer, bears, turkeys, squirrels, and a variety of other wildlife fattened up on the sweet crop of nuts that fell every year," he says.

Gerald Angel has similar memories of another tree in Reynolds County.

"I used to collect all the butternuts I wanted back then," he says. "They were good, too. We cooked butternuts like we did walnuts."

Memories like these are rare. Although chinquapin and butternut trees made lasting impressions on the minds of many Missourians during the past century, today there aren't enough of the trees left to continue their legacy without individuals willing to fight to save them.

"Starting in the 1950s and 1960s, all of the trees started dying off," Adams says. "Now they are all gone and no one has heard of them."

## The Butternut

Butternut lumber was historically used for fine wood products such as furniture, cabinets, wall panels, church altars, and stagecoach interiors. Also known as "white walnut," the wood was valuable in the 18th and 19th centuries all over the eastern United States, but few modern loggers have even seen a butternut tree.

Butternut is a relative of the black walnut, but it's easy to work and is much lighter. "The lumber is beautiful," says Greg Hoss, retired manager of the George O. White Nursery in Licking. "It has the same grain and texture as black walnut, but is a lighter brown color. The wood carves like butter and glues together well."

Hoss's family has owned land along Missouri's Black River in Iron County since the mid 1970s. There, a scattering of butternuts grew in the hills and along the river. Many were 15–20 inches in diameter.

"Some of the trees lasted until the 1990s," Hoss says. "But on our 30 acres, we don't have any butternut left, nor do we see any downriver on the neighbor's property."

Hoss's story is identical to many other landowners and one that resounds with carvers who prefer to work with butternut wood. Unfortunately, they soon may not be able to obtain it.

## The Ozark Chinquapin

The sweet nuts of the Ozark chinquapin compare to the pecan, but resemble acorns. Instead of a cap, they sport a spiny burr to protect the nuts from early harvest by squirrels and mice. This makes for easy tree identification.

Tino Burnett is a Cherokee tribe member who now resides in Eucha, Okla. When recalling his youth in the Ozarks, he remembers the chinquapin's burrs as much as the nut's sweet taste.



The Ozark chinquapin trees are known for their attractive and rot-resistant lumber.  
Top right insert: A ripening Ozark chinquapin.

"I used to walk the woods with bare feet. My skin was tougher then," Burnett says. "I'd step on those burrs and boy, did it hurt."

Although Burnett remembers using rocks to crack the nut out of the burrs, he says it was worth the pursuit. "We'd walk miles to get to a chinquapin tree," he says.

But the tree's value goes far beyond just being used as a food source. Chinquapin trees are known for their attractive and rot-resistant lumber, whose uses ranged from fence posts and shingles to fine furniture, dulcimers, and violins. The trees provide food and shelter to wildlife, and Native Americans used the leaves for a cough medicine and the bark as an astringent.

## Two Trees, One Tale

Where these two trees' paths collide is in their demise. Both are succumbing to exotic diseases. Butternuts are dying throughout their range in North America due to a fungus, commonly called the butternut canker, which causes multiple branch and stem cankers that eventually girdle the infected trees, according to MDC Resource Forester Marty Calvert.

Calvert says sprouts that develop from an infected tree are also infected and usually die within a few years. "The canker has been detrimental to butternut trees for roughly 60 years, girdling the trees before they can bear much fruit," he says.

Succumbing to a different ailment, Ozark chinquapins are maligned by the same Chinese chestnut blight responsible for decimating the American chestnut of the eastern United States. Relation to such a magnificent tree carried an unforeseen price in disease susceptibility for the chinquapin.



**The state nursery mixes and grows as many butternut seeds as they can each year and scatters butternut seedlings on Missouri conservation areas.**



**Although butternut trees made lasting impressions on many Missourians during the past century, today there aren't enough of the trees left to continue their legacy without individuals willing to fight to save them.**

## Agents of Possibility

A sign of good fortune for both tree species is that in this "Mission Impossible," there's more than one hero fighting for success. Landowners, MDC, and a citizen-led, not-for-profit organization have joined forces to save the trees.

Bollinger County resident, Nick Elfrink, is raising butternut trees on his property after picking up nuts in 1987 from butternuts that were next to Trace Creek near Gypsy, Mo. When he moved into his house on the other side of Marble Hill a year later, he planted the nuts on his property. Twenty-five years later, the trees are thriving, with no sign of disease.

"They continue to mature, bloom, and produce nuts every year without much maintenance on my part," Elfrink says.

Elfrink collects the nuts and plants them near his garden and in his woods. He says that eight or 10 of the trees are growing well. Besides spreading seedlings across his property, Elfrink manages his tree stand by thinning out older red oaks to grant sunlight to the younger trees.

Conservationists hope efforts like these will help existing trees grow and stay healthy long enough to develop a resistance. Although the butternut is the canker's only host in Missouri, Calvert says a few individual trees, like Elfrink's, have been found to have little or no signs of canker.

"If seeds can be collected from trees that show no signs of infections, but have come in contact with the disease, then resistant seedlings could be nurtured," Calvert says.

According to Hoss, the state nursery purchases butternut seed from landowners and seed collectors every year. They mix it and grow as many seeds as they can while continuing to scatter butternut seedlings on Missouri's conservation areas.

"We're trying to keep the species alive on the outside chance that resistance is found or the disease disappears," Hoss explains.



Hoss hopes more landowners will share seeds to meet the demand. Generally, Hoss says the nursery receives only 250 to 500 pounds of seed per year, and sometimes not even that much. Although this yields several thousand seedlings, it's not nearly the 1,500 pounds of seed the nursery would need in order to provide seedlings for private landowners.

The Ozark Chinquapin Foundation, a group of citizens who are determined to save the chinquapin, hopes to protect their favorite species as well. Their goal is to restore the Ozark chinquapin to its native range and establish a viable chinquapin seed base.

"Through research and cross-pollination of surviving trees, we hope to develop a pure Ozark chinquapin that is blight resistant," says the group's president, Steve Bost. He adds that the group will make chinquapin seeds available to anyone who wants to help reestablish the tree to its native range.

### **You Can Be an Agent, Too**

Ultimately, more people must learn to identify and care for the few remaining chinquapin and butternut trees to

**Butternuts are dying throughout their range in North America due to a fungus, commonly called the butternut canker, which causes multiple branch and stem cankers that eventually girdle the infected trees.**

ensure the survival of these species in Missouri. On private property, landowners can help by identifying butternuts on their property and taking care to preserve them as long as possible, Hoss says.

Landowners should cut out nearby trees that are competing for sunlight, and take care not to damage the tree with lawn mowers or other equipment. Wounds can weaken a tree and allow insects and diseases to access the inner bark, which speeds up the decline process.

"We hope to help the trees live long enough to produce nuts so more seedlings can be planted as the older trees die out," Hoss says.

By working together, conservationists hope the two trees can go from "Mission Impossible" to "Mission Complete," making Missouri forests a better place for wildlife and future Missourians. ▲

# MISSOURI TRAWLER

New use for old gear revolutionizes how river scientists detect species that live in the deep, swift waters of Missouri's great rivers.

*by* DAVE HERZOG *and* ROBERT A. HRABIK  
*photos by* DAVID STONNER



Bob Hrabik trawls for small fish sampling on the Mississippi River at Cape Girardeau.

**S**CIENCE SOMETIMES MAKES BIG leaps in response to small questions. Our question was: How can we capture more fish species, and smaller members of those species, in large rivers? The answer was a simple merger of a standard large-meshed trawl with small mesh. This gear, and the technique for its use, have since become popular around the world.

**Trawling was initially considered too similar to a deep-water seine to justify consistent use, but that thought changed when many new fish records were being captured with the trawl.**

Trawls (a net pulled by boat, similar to a shrimper's trawl used in the oceans) were being used by some large-river scientists to sample fish populations, but they were not catching many rare or small fish.

To estimate what kinds of fish, how many, and of what sizes were passing through a standard trawl, the small mesh material was placed outside the trawl body. As fish passed through the larger inner-panel mesh, they were captured in the smaller-meshed, outer panel (and funneled



**As fish pass through the standard larger-meshed trawl, they are captured in the smaller-meshed, outer panel of netting. This new design became known as the Missouri Trawl.**

to the end of the net, called the cod-end). This experimental dual-mesh trawl was implemented as part of a research effort and was shown to greatly increase the number of species and individual fish caught compared to the original trawl.

The unique pass-through design of the experimental trawl allowed us to demonstrate that we were catching fish with the old trawl, but most of the fish were simply passing through the large mesh and never made it to the cod-end. The new design became known as the Missouri Trawl by the late 1990s.

Initially the technique of trawling was considered too similar to a deep-water seine to justify consistent use. However, that thought changed based on the many new fish records that were being captured when using the trawl. For example, in 1998 the first known “young-of-the-year” (less than 1-year-old fish), federally endangered pallid sturgeon was captured in a Missouri Trawl. Then, from 2000–2001, the Missouri Trawl was used to obtain unprecedented information on the abundance and distribution of sicklefin chub and sturgeon chub, which at the time were candidate species for federal protection. The data was critical to the U.S. Fish and Wildlife Service in determining the status of the populations.

The effectiveness and ease of use of the Missouri Trawl continued to gain it popularity as Big Rivers and Wetlands Field Station staff completed several how-to-trawl workshops. During this time, we began developing variations of the original 16-foot-wide Missouri



**THE MISSOURI TRAWL** is an effective sampling gear in deep, swift rivers. It was designed to skim the bottom of streams and rivers where no other gear can be effectively deployed. The trawl has helped scientists better understand what kinds of organisms live in such places and where they are distributed. Below and on the following page are some examples of rare and unusual organisms captured by the trawl in Missouri.



### Pseudiron Mayfly (*Pseudiron centralis*)



Localized common names for this rarely seen mayfly are white sand-river mayfly and flat-headed mayfly. The species is widespread across North America, but is not known from the St. Lawrence River and some drainages west of the Rocky Mountains. It is generally considered to be rare and is often listed as a state endangered or threatened species. However, because this species lives in large, sandy rivers, which are difficult to sample, it is probably more common than records indicate. In the Mississippi River bordering Missouri, it is frequently encountered when using the trawl and can be abundant in the river above St. Louis. Unlike most mayflies, this species lives primarily on the surface of sandy-bottomed rivers.

The nymphs are mostly yellow with black eyes but males are darker, having browns and reds over the body and bluish eyes. It is a ferocious predator eating mostly fly (chironomid) larvae (also called red worms), but also eats other mayflies. They crawl over the sand like crabs as they hunt prey. Eggs are deposited in the sand and lay dormant over winter. They hatch in May to June. The larvae grow quickly, completing their life cycle in one summer and will emerge in August as adults. Unlike some mayflies for which they are famous, this species does not emerge in masses covering bridges and roadways.

### Ohio Shrimp (*Macrobrachium ohione*)



The genus *Macrobrachium* is known as the “large river shrimps.” Most are marine, but four species enter freshwater. Only one species, the Ohio shrimp, is found in Missouri. This species enters freshwater rivers of the Eastern Seaboard from Virginia to Florida and of the Gulf Coast from Alabama to Texas. In the interior United States it has been found in the

Mississippi and Ohio river systems from Oklahoma to Ohio. It has also been found in the lower Missouri River where it is extremely rare.

Prior to 1940, the Ohio shrimp population was so abundant it supported a commercial fishery in the Mississippi River below St. Louis. Towns along the river, such as Cape Girardeau, often had “shrimp fries.” By the late 1940s the species became rare in the Mississippi River above Cairo. The last known collection of Ohio shrimp from this reach was at Cairo in 1962. However, they were rediscovered by MDC scientists in 1991 from the Mississippi River near Cape Girardeau. Apparently, the species persisted in the river undetected in low numbers until a Mississippi River monitoring program was established at Cape Girardeau.

Ohio shrimp can be 4 inches long as adults. They are translucent when alive and have numerous brownish-orange spots or speckles covering the body. The head has a rather distinctly serrated rostrum (a spear-like protrusion projecting forward from the head). Ohio shrimp eat a variety of foods, including vegetation, invertebrates, and fish. They can quickly swim forward or backward to capture prey or avoid being eaten.

Ohio shrimp are amphidromous meaning individuals of various life stages regularly migrate between fresh and salt water. Reproduction occurs in freshwater but the young develop in saltwater. Juveniles migrate up freshwater rivers to mature, especially females. Ovigerous females (those carrying eggs) have been found in the Mississippi River near Cape Girardeau. This poses an interesting and yet unsolved mystery: If ovigerous females reproduce in Missouri, and young need saltwater to develop, can some fraction of the young survive in freshwater? Or do the ovigerous females swim all the way to the Gulf of Mexico to reproduce?

## Blue Sucker (*Cyprinus elongatus*)



KONRAD SCHMIDT

This species is rarely seen by anglers but when caught it garners attention. It has been given several colorful names such as blackhorse and schooner. This is a big-river fish distributed widely in the Missouri, Mississippi, and Ohio river systems, but

it occasionally moves into larger tributaries. Blue Sucker reproductive migrations were well known before dams were placed on many rivers, but are much reduced today. They were considered by several states to be an endangered or threatened species.

The blue sucker is a slender fish with a small head and mouth, and a long sickle-shaped dorsal fin. The back and sides are dark blue in some individuals but others may appear olive to pinkish. The belly is white. Like most suckers, it feeds on the bottom of rivers consuming a variety of immature insects (of which the *Pseudiron* mayfly nymph is a likely food item). A moderately large fish, it can weigh more than 20 pounds, but individuals larger than 5 pounds are rare. They spawn in Missouri in April over rock, gravel, and firm sand.

Larval blue suckers were rarely reported prior to the 1990s, probably because of the difficulty in being able to sample the relatively deep and swift water occupied by the young. Trawling is an effective method to capture larval and juvenile blue suckers. Given the efficacy of trawling and improved understanding of where these fish live, they are no longer thought to be rare over some of their range.

## Trout-perch (*Percopsis omiscomaycus*)



DAVE OSTENDORF

This species is an evolutionary intermediate between the Salmoniformes (trouts) and the derived Perciformes (perches). On its back, posterior to the dorsal fin, is a fleshy, rayless structure called an adipose fin. Adipose fins are found on more primitive fishes such as catfishes and trouts. This is a thick-bodied, straw-colored fish with several rows of dusky, brownish spots traversing its sides. There are only two species of trout-perches (family Percopsidae), the other is found in the northwestern United States and is called the sand roller (*P. transmontana*). Trout-perch is a wide-ranging species found from Alaska to Maine and from the Hudson Bay to Virginia. It is common over most of its range but is uncommon in Missouri. It is best known in Missouri from Locust Creek.

This is a small fish usually less than 5 inches long. Little is known about its habits and life history in Missouri. It probably spawns in March along the edges of streams in shallow water. It eats aquatic insects and other small invertebrates. It is known to move from deep water during the day to shallow water to feed at night. Trawling has been very effective in sampling this species. We have documented trout-perch at depths of 30-60 feet during daylight hours in various parts of its range.

## Crystal Darter (*Crystallaria asprella*)



KONRAD SCHMIDT

This species gets its name because it is found in clear streams with clean sand and gravel and because it is well camouflaged by its color and markings; it appears as crystalline as the quartz sand deposits in which it is found.

The crystal darter is found in moderately large rivers from Minnesota to Louisiana and from Alabama to Indiana. It is considered to be uncommon to rare over most of its range. An eastern form found in the Upper Ohio and Cumberland rivers

of Tennessee and Kentucky has been described as a new species, diamond darter (*C. cincotta*), and it has been presumably extirpated from most of its range except in the Elk River, West Virginia. In Missouri, crystal darters are found in the Gasconade and Meramec rivers in the northern part of its range and in the Black, and St. Francis rivers to the south. It is no longer thought to exist in the Floodway ditch system in the south.

The crystal darter is slender with a pale-yellow body and four or five brownish cross-bars. The sides have several oblong dull blotches. The belly is white. This is a large darter that can be up to 7 inches long. Little is known about its habits and life history in Missouri. It probably breeds in late winter or early spring. It grows quickly; up to 6 inches long at the end of the second year of life. Food items include immature insects, especially midges, blackflies, and caddisflies.

Prior to the development of the Missouri Trawl, data suggested that this species was rapidly disappearing from Missouri. It was last collected from the St. Francis River and Floodway ditches in 1964. By the late 1970s, it was no longer seen from the Meramec River. Extant populations were known only from the Gasconade and Black rivers. However, trawling since 2000 has yielded many specimens in the Meramec, Gasconade, and Black rivers. Crystal darters observed in aquaria will bury into sand with only their eyes exposed. This was presumed by scientists but had not previously been documented.

Trawl, such as the 8-foot Mini-Missouri Trawl. Invitations for workshops soon followed from neighboring state researchers.

During the early 2000s, trawling workshops were conducted in Tennessee, Nebraska, Illinois, Kentucky, Arkansas, Iowa, and Mississippi in conjunction with ongoing large river monitoring and research efforts in those states. Each workshop yielded new fish records and further increased biologists' interest in using the technique. However, it wasn't until invitations began coming from Minnesota, New York, Pennsylvania, Vermont, and Canada that field station staff began to understand the relevance of the research to a much larger resource contingency—perhaps worldwide in scope. Researchers from the Netherlands, Poland, Australia, and South America have all expressed an interest in using or have already used Missouri Trawls in their programs. A demonstration in China was completed in 2009 as part of large-river scientific exchange program and the Mini-Missouri Trawl was used on the Yangtze River.

The Missouri Trawls are used to capture young individuals of many fish species because understanding early life information (reproduction) is important to the management of fish. If the species doesn't reproduce there will soon be no fish for anglers to catch. The trawls are being used to study early life information for paddlefish, channel catfish, blue catfish, shovelnose sturgeon and many other species. They are also used to investigate young crappie abundance in some lakes because other methods do not capture them.

Trawling is useful for capturing species that are rarely sampled by other gear. Missouri Trawls have captured more *Pseudiron* mayflies than any other sampling gear used. The *Pseudiron* mayfly is known to be eaten by the federally endangered pallid sturgeon. They have also been used to capture Ohio shrimp (a Missouri species of conservation concern), and new research is uncovering their usefulness for sampling young mussel populations in large rivers.

Trawling is a useful method for sampling in small to large waters. While the Missouri Trawls are particularly useful to sample small, rare fishes in deep, swift-water habitats, they are now used throughout the United States



and internationally in smaller rivers and large creeks. They can also be used by detaching them from a boat and pulling by hand in water that is too shallow to motor through.

Trawling has become widely used since the creation of the Missouri Trawl in 1997 and has been incorporated into many sampling protocols. As a large-river scientist from Illinois told us, "This technique will forever change how we sample large rivers." A Canadian researcher who works on smaller rivers and lakes reported that the trawl also helped enhance the knowledge of small fishes in the lower Great Lakes and tributaries.

Independent researchers are now creating new variations of older trawl designs that sample throughout the water column and some are attempting to chase down invasive species like the Asian carps. Sampling technique books now suggest trawling as part of a thorough fish-sampling protocol, further identifying the importance of the technique. ▲

**The Missouri Trawl has become an example to other states and countries for ongoing large-river monitoring and research efforts.**



# FISCAL YEAR 2011-2012 Annual Report

This summary of the Annual Report highlights the Missouri Department of Conservation's accomplishments and expenditures from July 1, 2011, through June 30, 2012. These accomplishments are based on the Department's five main goals. Not only does this summary highlight the accomplishments of the Department, but it emphasizes that Missourians care about conserving forests, fish, and wildlife; that we work with Missourians and for Missourians to sustain healthy forests, fish, and wildlife; that we help people discover nature; that conservation makes Missouri a great place to hunt and fish; and that conservation pays by enriching our economy and quality of life.



## Healthy Forests, Fish, and Wildlife

### ***Elk Reintroduction***

Wild elk returned to Missouri after 150 years. MDC, the Kentucky Department of Fish and Wildlife Resources, and the Virginia Department of Game and Inland Fisheries captured elk in Kentucky during December and January (2010–11 and 2011–12). MDC and the Missouri Department of Agriculture developed protocols to ensure the health of livestock and wildlife once elk were released. After health protocols were met, 34 elk were moved to Missouri in 2011 and 35 (plus a newborn calf) in 2012. The elk were kept in a holding facility on Peck Ranch Conservation Area (CA) for about a month to allow acclimation and to complete health protocols. In 2011, all elk were released on Peck Ranch CA. In 2012, some elk were released on Peck Ranch CA while others were moved to a release site on The Nature Conservancy property. Currently, auto routes are open on parts of Peck Ranch CA to allow visitors to view elk.

### ***Hellbender Restoration***

Both Ozark and eastern hellbenders are listed as state endangered, and on Nov. 7, 2011, the Ozark hellbender was added to the federal endangered species list. MDC's Shepherd of the Hills Hatchery and the Ron Goellner Center for Hellbender Conservation at the Saint Louis Zoo are devoted to hellbender propagation. In the fall of 2011 was the world's first breeding of a captive Ozark hellbender at the Saint Louis Zoo. About 150 Ozark hellbenders were hatched.

### ***Wildlife Code Enforcement***

MDC enforces laws in the *Wildlife Code*, as well as other state laws for the safe public use of MDC-owned lands. Conservation agents contacted 200,714 hunters and anglers last year to ensure compliance and provide regulation information. During these contacts, agents noted 27,288 resource violations, issued 3,631 written warnings and made 7,256 arrests.

### ***Black Bear Research***

In 2010, MDC, in cooperation with Mississippi State University and with funding from the Federal Aid in Wildlife Restoration Act, began the first Missouri black bear research project. From July 2010 to May 2012, 45 bears were captured and tagged. Of those, 28 were males and 17 were females. Bears that were large enough were fitted with a radio collar. Our population estimate is 108 bears for the southwest portion of the study area.

### ***National Fish Habitat Initiative***

The National Fish Habitat Partnership has included Table Rock Lake on their ten waters to watch list. The designation is due to on-going efforts to improve habitat through the National Fish Habitat Initiative and More Fish Campaign. There have been 1,460 brush structures, 104 rock piles, 49 stump fields, 11 rock/stump combos, and 26 rock fences installed.

### ***Chronic Wasting Disease in Missouri***

Chronic wasting disease (CWD) is a fatal disease that affects deer, elk, and other cervids. Since its discovery in 2010, CWD has been found in 11 captive cervids and five free-ranging deer in Macon and Linn counties. As part of the MDC's ongoing efforts to monitor the disease, we will continue testing hunter-harvested deer in the CWD containment zone. MDC also is working with area landowners to limit the prevalence and spread of CWD. With the help of hunters, MDC has tested more than 35,000 free-ranging deer for CWD statewide since 2002.

## **Manage Lands in Public Trust**

### ***Community Fisheries Assistance***

Through the Community Assistance Program and the Corporate and Agency Partnership Program, MDC has agreements (usually 25-year) with cities, counties, state and federal agencies, businesses, foundations, schools, and colleges to provide fisheries management at lakes and ponds and cooperatively develop and maintain facilities for anglers at lakes and streams. MDC has agreements with 117 partners for the cooperative management of 168 public lakes, 42 stream-access areas, four lake-access areas, and 10 aquatic education ponds.

### ***Cold-Water Fish Hatcheries***

MDC stocked 1,451,984 trout among five trout parks, 12 stream special management areas, and Lake Taneycomo. Anglers purchased 310,212 daily adult tags, 62,007 daily youth tags, and 88,699 trout fishing permits.

### ***Warm-Water Fish Hatcheries***

In 2011, 6.4 million fish were stocked in public waters. Highlights include: 216,821 hybrid striped bass, 5,346 muskie,



**Trout at Roaring River State Park**

3,222 pallid sturgeon, 3,683 paddlefish, 12,899 advance-sized largemouth bass, 7,803 hybrid sunfish, 177,392 channel catfish, more than five million walleye fry, and more than 1.5 million walleye fingerlings were stocked in Missouri waters.

### ***State Forest Nursery***

The state forest nursery annually grows and distributes about 3 million seedlings of more than 60 species. The seedlings are planted on public and private land. The nursery filled more than 10,700 orders with more than 21,600 packages of seedlings.

### ***Forest and Woodland Improvements***

We improved forests and woodlands on 49,687 acres of state land. This included thinning young trees on 1,775 acres, eradicating invasive plants on 3,416 acres, post-sale cultural work on 1,421 acres, prescribed fires on 9,756 acres, 114 acres of tree planting, and harvest of 8,578 acres.

### ***Land Management***

MDC conducted habitat management on more than 191,000 acres of public land including: 39,000 acres of wetland, 23,000 acres of woodland/forest/savanna, 80,000 acres of cropland (67,000 acres through permittee farmers and 13,000 acres in food plots), 29,000 acres of grassland/prairie, 19,000 acres of old fields, and 1,000 acres of glade.

### ***Golden Anniversary Wetlands***

MDC is rehabilitating five of our oldest wetland management areas through the Golden Anniversary Wetlands Initiative. Work at Ted Shanks and Montrose conservation areas is complete. Fountain Grove Conservation Area (CA) pump design and installation is underway. Schell Osage CA work will begin in FY14. Duck Creek CA construction is about 50 percent complete. A second \$1 million North American Wetland Act grant was awarded to MDC to support the second phase at Duck Creek CA.

**Duck Creek Conservation Area is one of five wetland areas that MDC is rehabilitating through the Golden Anniversary Wetlands Initiative.**

### ***New Office in the Central Region***

MDC opened a new Central Regional Office and Conservation Research Center in Columbia. The facility houses 120 employees formerly housed at two facilities, laboratories, a 100-seat conference room, and a lobby where the public can pick up free brochures and obtain hunting and fishing permits. The building incorporates green building concepts.

## **Sound Financial Accountability**

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### ***Internal Audits***

MDC employs one internal auditor who performs regular, independent audits to ensure that public funds are expended in a responsible manner. In fiscal year 2012, there were no major findings noted with the business practices reviewed.



DUCK CREEK CA PHOTO BY NOPPADOL PAOTHONG

### **Information Technology**

We completed analysis for the Land Tracking System, the Infrastructure Inventory System, and the Enterprise GIS Repository. These systems will significantly improve MDC's ability to manage public land and infrastructure.

## **Citizen Involvement/Education**

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### **Listened to Missourians**

Part of delivering excellent service is listening and understanding what Missourians say about conservation programs and services. In FY12 there were 52 activities that involved 72,061 people. These included surveys, focus groups, open houses, comments and presentations to the Regulations Committee, and contacts with MDC's ombudsman.

### **Find MO Fish Mobile Phone Application**

This free mobile application shows a map of Missouri with the locations of public boat ramps to the major lakes, rivers, and streams. The map also shows the location of underwater fish structures MDC has placed. With the geo-location feature, anglers can guide their boat to a fish attractor.

### **Discover Nature Schools**

Discover Nature Schools helps teachers engage students in hands-on, outdoor learning. Thus far, 53 schools taught the primary unit, 403 schools taught the elementary unit, 272 schools taught the middle-school unit, and 110 schools taught the high school unit. Conservation grants supporting Discover Nature Schools totaled \$212,246.

### **Technical Assistance to Landowners**

MDC served landowners through approximately 71,579 rural and urban contacts, including more than 7,000 on-site visits. Staff answered 5,088 wildlife nuisance or damage assistance requests, including 1,000 on-site visits.

### **Private Lake and Stream Management**

We responded to 4,974 requests for watershed, floodplain, riparian corridor, stream or lake management information, and/or technical assistance. We made 660 on-site visits. On-site work included 119 fish-population surveys, 14 renovations, and 40 fish-kill investigations. Staff conducted 12 stream or lake management workshops for 298 people. We also coordinated or participated in 28 watershed-management projects.

### **75th Anniversary Celebration**

MDC celebrated 75 years of Missouri's unique, citizen-led conservation. The celebration included a half-hour TV program, special events, publications, and *Missouri*



**The Discover Nature Schools program helps teachers engage students in hands-on, outdoor learning.**

*Conservationist* magazine articles that will culminate in a book. As part of MDC's 75th Anniversary, we hosted a photo contest. More than 1,880 people submitted almost 13,000 photos in seven categories.

### **Peregrine Falcon Web Camera**

MDC, Ameren Missouri, and the World Bird Sanctuary provided citizens with a view of peregrine falcons raising chicks in a nesting box at Ameren's Sioux Energy Center in Franklin County. The camera was live for viewing from 7 a.m. until 8 p.m. seven days a week on each partner's website. Viewing was available until the falcon's five young left the nest.

## **Engage Partners at All Levels**

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### **Wetland Restoration Assistance**

Since 1992, MDC has assisted the U.S. Department of Agriculture Natural Resources Conservation Service in restoring critical wetlands. Over the past two years, Missouri has received about \$43 million to assist landowners in wetland restoration. Missouri has 1,000 easements covering 139,815 acres through the Wetland Reserve Program.

### **Stream Teams**

Missouri has 3,796 active Stream Teams statewide. Volunteer activities included removing 459 tons of trash, planting 5,254 trees, and hosting 1,228 events.



**With partial funding from the U.S. Forest Service State and Private Forestry, MDC worked with the City of Joplin to plant trees, distribute hundreds of trees to homeowners, and coordinate numerous offers of financial assistance, as well as more than 9,000 hours of volunteer time.**

### ***Community Tree Care***

MDC's Tree Resource Improvement and Maintenance cost-share program provided \$271,306 to fund the 37 best applications. Successful applicants receive 60 or 75 percent of their total project in cost share within specified limits. The applicant provides the remaining balance. Applicants matched the MDC contribution by 46 percent providing \$233,973 in local match.

### ***Joplin Tornado Assistance***

MDC worked with the U.S. Army Corps of Engineers and the State Emergency Management Agency to evaluate all remaining trees in the areas primarily effected in Joplin and Duquesne. Two Tree Resource Improvement and Maintenance grants were provided to the City of Joplin. Four plans for three Joplin parks were completed. Financial assistance was provided to Forest ReLeaf of Missouri to expand their tree nursery to provide trees to Joplin and Duquesne in the coming years. With partial funding from the U.S. Forest Service State and Private Forestry, MDC worked with the City of Joplin to plant more than 2,500 trees, distribute hundreds of trees to homeowners, and coordinate numerous offers of financial assistance, as well as more than 9,000 hours of volunteer time.

### ***Share the Harvest***

Conservation agents coordinate and support the Share the Harvest program with the Conservation Federation of Missouri, local charitable organizations, and local meat processors. In 2011, approximately 6,191 hunters donated 317,882 pounds of venison to less-fortunate Missourians.

### ***Stream Stewardship Trust Fund***

The Stream Stewardship Trust Fund is available to restore, enhance, and/or protect streams and their surrounding habitats. The Missouri Conservation Heritage Foundation runs the program, and MDC applies for grants. Last year, seven projects costing \$763,896 were approved.

### ***Volunteer Fire Departments***

MDC, in cooperation with the U.S. Forest Service, granted \$371,101 to 185 volunteer fire departments. The grants fund protective clothing, equipment, and training. Equipment was also provided through two federal programs. Through the Federal Excess Property Program we obtained equipment valued at \$427,287. The new Fire Fighter Program obtained equipment valued at \$13,165,721. Since 1951, we have assigned more than \$70 million in equipment to volunteer fire departments.

### ***Wildfire Suppression***

In FY12, MDC cooperated with fire departments across the state to suppress 3,505 wildfires that consumed 35,141 acres. The main cause of wildfire is the use of fire to dispose of debris.

# Fiscal Year 2012 Summary

**County Assistance Payments—\$1,498,157** Paid county levee and drainage district taxes, forest crop-land payments, in lieu of real estate taxes, and county aid road trust payments. Since 1980, paid more than \$15.9 million to Missouri counties in lieu of real estate taxes.

**Capital Improvements—\$18,008,745** Constructed, renovated, and repaired fish hatcheries, river accesses, wetlands, shooting ranges, nature centers, and facilities statewide; and acquired land.

**Fisheries—\$12,882,551** Managed sport fish populations, aquatic biodiversity, and aquatic habitats. Managed 1,012 areas for fishing, and assisted 5,734 landowners with stream and lake management. Stocked about 9.1 million fish in public waters.

**Forestry—\$18,438,507** Distributed about 3 million seedlings to 10,700 landowners, provided forestry assistance on more than 52,088 acres of private land and to more than 150 municipalities, managed 438,700 acres of public forest, monitored insect and disease threats, and facilitated development of the state's forest industry.

**Wildlife—\$19,099,360** Managed more than 525,000 acres of public land and implemented programs to maintain and restore natural communities and wildlife diversity statewide.

**Outreach and Education—\$15,417,635** Nearly 800,000 visited nature centers and shooting ranges, more than 500,000 subscribed to the *Missouri Conservationist*, more than 120,000 subscribed to *Xplor*, and more than 5.5 million visited MDC's website. Also provided more than \$200,000 in grants to schools, conservation curriculums for schools, outdoor skills programs, and hunter education.

**Private Land Services—\$7,307,532** Made 71,579 rural and urban landowner contacts, affected 237,290 acres through technical assistance to landowners, provided habitat management workshops to 41,000, assisted 5,088 landowners with nuisance wildlife, and assisted with the formation of 18 landowner cooperatives.

**Protection—\$15,245,000** Provided wildlife law enforcement in every county as well as resource management, information, education, and public service. Conservation agents contacted 718,796 people. Coordinated the Share the Harvest program. Conservation agents, along with 1,136 volunteers, conducted 905 hunter education classes, certifying 21,975 students.

**Resource Science—\$10,985,166** Monitored the status of Missouri's fish, forests, plants, and wildlife, recommended conservation actions, evaluated these actions and reported the results. Contacted tens of thousands of Missourians to determine their outdoor activities and opinions about conservation programs.

**Regional Public Contact Offices—\$2,720,688** Provided regional offices to directly serve Missourians.

**Administrative Services—\$24,722,804** Paid for hunting and fishing permit sale systems, fiscal services, purchasing, distribution center, and sign shop. Provided agency-wide postage and printing services, fleet management, vehicle and equipment maintenance, and other agency appropriations. Includes information management and technology that supported all computers, software, telephones, and other telecommunications systems.

**Human Resources—\$2,499,008** Provided the services to recruit, employ, and train employees.

**Design and Development—\$12,464,762** Provided engineering, architectural design, cultural resource review, surveying and construction, as well as maintenance of conservation areas and facilities.

**Administration—\$1,620,110** Provided audits, legal counsel, strategic planning coordination, federal reimbursement administration, environmental policy development, public involvement, and river basin coordination.

## By the Numbers

### RECEIPTS

Conservation Sales Tax	\$100,566,000
Permit Sales	\$32,850,045
Federal Reimbursements	\$25,141,633
Sales and Rentals	\$7,480,667
Other Sources	\$3,320,018
Interest	\$308,776
<b>Total Receipts</b>	<b>\$169,667,139</b>

### DISBURSEMENTS

County Assistance Payments	.092%
Capital Improvements	11.06%
Fisheries	7.91%
Forestry	11.32%
Wildlife	11.72%
Outreach and Education	9.46%
Private Land Services	4.49%
Protection	9.36%
Resource Science	6.74%
Regional Public Contact Offices	1.67%
Administrative Services	15.18%
Human Resources	1.53%
Design and Development	7.65%
Administration	0.99%

### MISSOURI STATE BUDGET

Health & Social Services	42.1%
Education	25.6%
Government Services	19.5%
Transportation	9.4%
Natural & Economic Resources	2.8%
Conservation	0.6%

MDC represents less than 1% of the total state budget

<b>Total State Budget</b>	<b>\$24,952,863,105</b>
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## Yellow-Rumped Warbler

*Surviving winter in Missouri is no problem for this small bird.*

WE WOKE TO falling snow on a Friday morning last winter, and I noticed a flash of yellow as I surveyed the surrounding fields for wildlife. A smallish bird was flittering from limb to limb in my favorite cedar tree, the one with all of the powder-blue juniper berries. I knew right away it was a yellow-rumped warbler (*Setophaga coronata*), Missouri's winter warbler. When we think of winter birds in Missouri, several come to mind including cardinals, titmice, juncos, and chickadees. Most warblers have migrated south to exotic locations like the Yucatan Peninsula by late fall, but yellow-rumped warblers have no trouble enduring Missouri winters. I used to think yellow-rumped warblers were simply more tenacious than other warblers, but I later learned that their unique ability to digest a variety of berries allows them to thrive much farther north in winter than other warblers that depend on insects to survive.

I decided to set up a blind near the cedar tree before I departed for work, hoping that it would blend into the scenery by the next morning. It continued to snow throughout the day and by the time I made it home, the blind was already sagging under the weight of fresh powder. It was too late to try for a photograph so I prepared my gear and went to bed. When the promise of morning finally arrived, I headed down the hill and began my stand even though I knew it would be at least an hour and a half until I'd have enough light for a shot. It wasn't long before I began to doze. I awakened at sunrise to find the cedar tree devoid of avian activity and when shooting time finally arrived, the warbler did not.

By lunch time I headed to the house for some fireplace time. As I sat by the fire I started thinking about how goldfinches fed on coneflowers next to my driveway in the summer and how they were completely unafraid of my truck as I arrived home each afternoon. My new plan would be to drive my truck down the hill and park it near the cedar tree. There was a good chance I'd get stuck in the snow but I could always pull it out with the tractor. Shortly after lunch I made my second stand. I'll never know if it actually improved my chances for a photo, but my truck was much more comfortable than my hunting blind and I could even listen to the radio to break the monotony of staring at the lonely cedar tree.

Just as I began to settle in, a small bird in drab plumage landed in the tree and began feeding on the tiny blue cones. A flash of yellow confirmed it as a female yellow-rumped warbler. As I began to photograph the female, a second bird landed before me and I instantly knew it was what I'd been looking for—a male yellow-rumped warbler! Although its winter coat was subdued, it was a sight to behold and I was gratified to capture its image.

—*Story and photo by Danny Brown*

 EF300mm lens • f/5.6 • 1/25 sec • ISO 800

*We help people discover nature through our online field guide.  
Visit [mdc.mo.gov/node/73](http://mdc.mo.gov/node/73) to learn more about Missouri's plants and animals.*





## Shepherd of the Hills Hatchery and Conservation Center

*Learn about aquatic environments and trout management at this Ozark trout hatchery and its accompanying conservation center.*



MISSOURI'S LARGEST TROUT-REARING facility occupies 155 acres in the southwestern portion of the state, just south of Branson. Surrounded by Ozark forest and woodlands, Shepherd of the Hills Hatchery and Conservation Center is Missouri's primary source of rainbow and brown trout.

The hatchery produces approximately 1.2 million trout annually. About 80 percent are stocked in nearby Lake Taneycomo, one of Missouri's most popular fishing destinations, while the remainder help stock other trout-management areas statewide.

Along with the hatchery, Shepherd of the Hills includes a conservation center where visitors can learn about trout culture from spawning to release, aquatic life, fishing, and MDC's role in aquatic resource management. Free of charge and open year-round, the conservation center features a 3,500-gallon aquarium, a short video about raising trout and interactive displays about local fish, forests and wildlife.

To truly understand the hatchery's workings, you have to tour it. Self-guided tours are available year-round, along with guided tours at four different times on weekdays from Memorial Day through Labor Day. More than 250,000 people visit the hatchery each year.

Shepherd of the Hills Fish Hatchery offers opportunities for trout fishing and hiking. Four trails, three less than a half-mile and one 1.6 miles long, lead hikers through the hatchery's surrounding woodlands for an inside look at the Ozark landscape.

Three special events make Shepherd of the Hills a family vacation destination throughout the year. Vulture Venture, an annual event that occurs in late February, features one of nature's unsung heroes: the vulture. Vulture Venture attendees can view a live turkey vulture and one of Missouri's largest winter vulture roosts.

The hatchery and conservation center celebrate Earth Day with opportunities to learn what people can do, not only to reduce, reuse and recycle, but also to promote native landscaping, avoid introducing exotic species and use water resources wisely. This April event features interactive stations and displays along with free trees for visitors to plant.

Shepherd of the Hills' Family Fishing Day each June gives families a chance to fish in a stocked pond on Missouri's Free Fishing Weekend as well as learn about aquatic environments and fishing skills.

Shepherd of the Hills is located on Highway 165, 4 miles south of Branson. For more information, visit the website listed below.

—Rebecca Maples, photo by David Stonner

EF70–200mm lens • f/4 • 1/40 sec • ISO 200

**Recreation opportunities:** Bird watching, fishing, seasonal hatchery tours, hiking, special events

**Unique features:** Shepherd of the Hills features Missouri's largest trout hatchery and various opportunities to learn about trout management, fishing, and aquatic environments.

### For More Information

Call 417-334-4865 ext. 0 or visit [mdc.mo.gov/2853](http://mdc.mo.gov/2853)





# Hunting and Fishing Calendar

## FISHING

	OPEN	CLOSE
Black Bass from Ozark streams	5/26/12	2/28/13
Nongame Fish Giggling	9/15/2012	1/31/2013

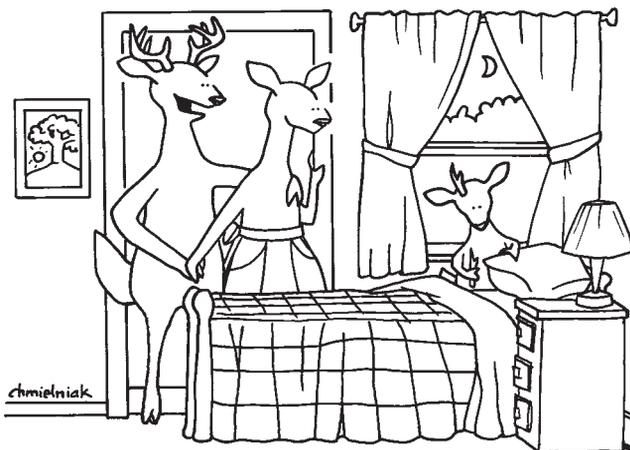
## HUNTING

	OPEN	CLOSE
Coyote	5/07/12	3/31/13
Crow	11/01/12	3/3/13
Deer		
Archery	11/21/12	1/15/13
Furbearers	11/15/12	1/31/13
Pheasant		
North Zone	11/01/12	1/15/13
Quail	11/01/12	1/15/13
Rabbit	10/01/12	2/15/13
Squirrel	5/26/12	2/15/13
Turkey		
Archery	11/21/12	1/15/13
Waterfowl	please see the <i>Waterfowl Hunting Digest</i> or see <a href="http://mdc.mo.gov/node/3830">mdc.mo.gov/node/3830</a>	

## TRAPPING

	OPEN	CLOSE
Beaver and Nutria	11/15/12	3/31/13
Furbearers	11/15/12	1/31/13
Otters and Muskrats	11/15/12	2/20/13

For complete information about seasons, limits, methods and restrictions, consult the *Wildlife Code* or the current summaries of *Missouri Hunting and Trapping Regulations* and *Missouri Fishing Regulations*, *The Spring Turkey Hunting Regulations and Information*, the *Fall Deer and Turkey Hunting Regulations and Information*, the *Waterfowl Hunting Digest* and the *Migratory Bird Hunting Digest*. For more information visit [mdc.mo.gov/node/130](http://mdc.mo.gov/node/130) or permit vendors.



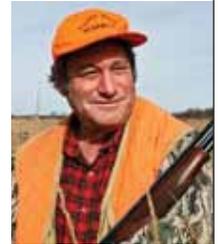
"Look at our little guy...putting his spike under his pillow for the Antler Fairy."

# Contributors



CANDICE DAVIS lives in Jackson, Mo., with her family. She is a Navy veteran, has a B.A. in cultural anthropology, and is employed as a media specialist with the Conservation Department. She enjoys photographing nature, deer hunting with her son, and exploring the outdoors.

BILL GRAHAM is a media specialist for MDC serving the Kansas City and northwest Missouri regions. A lifetime angler, hunter, and camper, he especially enjoys being afield or afloat where the woodlands and the prairies mingle. A native of Nevada, Mo., he lives with his family near the Platte River at Platte City in Platte County.



A.J. HENDERSHOTT lives with his family in rural Cape Girardeau County. He enjoys hunting, fishing, drawing, and crafting wooden longbows. A.J. is an Outreach and Education supervisor with the Conservation Department, and he plants butternut and Ozark chinquapin trees on his land.

DAVE HERZOG enjoys working on Missouri's rivers. His hobby of fixing and tinkering fits well with his research role at the Big Rivers and Wetlands Field Station in Jackson, Mo. He appreciates the varying perspectives regarding Missouri's rivers but maintains an open invitation to anyone interested in a large-river trawling trip.



For 21 of his 26 years working for MDC, ROBERT A. HRABIK supervised a research station on the Mississippi River. His passion is ichthyology (taxonomy, systematics, distribution, and ecology of freshwater fishes). His motto is "have net, will travel," and he has seined and trawled in 27 states and provinces in North America.

## Operation Game Thief

Help put game thieves out of business. If you see a possible violation in progress, call your county conservation agent immediately or dial the toll-free number below:

**1-800-392-1111**

All information is kept in strict confidence. Desirable information includes names of violators, vehicle description and license number, as well as the violation location.

## AGENT NOTES *Shed Antler Hunting*

WITH MOST OF the fall and winter hunting seasons behind us, it's easy to plunge into a bit of a slump. Consider heading out to the woods and fields in search of shed antlers. Shed hunting is a great way to beat the winter blues while simultaneously attaining the extra benefit of getting some quality exercise. Winter is also a great time to be outside enjoying nature.

Another benefit is learning more about the deer herd in your area. Since whitetail bucks generally don't shed their antlers until after the breeding and hunting seasons are over, there is a good probability the buck that shed the antlers will be around for the next year's deer season. Other benefits include the many possible uses for the shed antlers you may find. Some people may just want them for a good set of rattling antlers, while others may want them to decorate their homes.

Before you head out shed hunting, there are certain things you should keep in mind. First and foremost,

be safe. Make sure you are in good enough health for strenuous, cold-weather activity. If you are going to shed hunt on private property, make sure to get the landowner's permission first. If you find a dead deer with the antlers still attached to the skull plate and take those into possession, you must contact a conservation agent within 24 hours to receive possession authorization. Shed antlers not attached to the skull plate found while afield may be possessed, bought and sold by any person without possession authorization.



Jerry Kiger is the conservation agent for Ozark County. If you would like to contact the agent for your county, phone your regional conservation office listed on Page 3.



SHED ANTLER HUNTING: NOPPADOL PAOTHONG



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## I Am Conservation

Students and school leaders of the Steelville School District pose in front of the biomass furnace that heats the school using wood chips. School leaders pictured are, from left: Leon Callahan, district maintenance director (on tractor); Nathan Holder, school superintendent; Walker Richards, wood chip supplier; and Scott Perkins and Tim Mullen, school board members. The Missouri Department of Conservation, in cooperation with the USDA Forest Service's State and Private Forestry program, awarded almost \$6 million in grants to six public schools for Fuels for Schools projects. These grant funds helped the school districts install boiler systems that use wood biomass from local public and private forest land to heat their facilities. "The Fuels For Schools Program has been very beneficial to our district, said Superintendent Holder. "We are now able to use a local natural resource from a local business and save money, which allows us to allocate more of our resources to benefit the students." Holder said the project was paid in entirety by the Fuels For Schools grant and would not have been possible without the assistance of MDC. —*Photo by David Stonner*